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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,440	02/13/2001	Katsue Koashi	13041.8US01	9867

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EXAMINER

THOMAS, COURTNEY D

ART UNIT	PAPER NUMBER
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2882

DATE MAILED: 08/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/782,440

Applicant(s)

KOASHI, KATSUE

Examiner

Courtney Thomas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 and 7 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 1 and 7 are objected to because of the following informalities:
2. Claim 1 as written contains grammatical structures that appear ambiguous and make it difficult to ascertain what applicants consider being their invention.
3. **Claim 1 preamble:** Examiner has concluded that the preamble contains terminology that limits the structure of the claimed invention and is considered essential to pointing out the invention defined by the claims (see MPEP § 2111.02). Examiner notes therefore that the correctness of the preamble be preserved by noting the following deficiencies:
4. The preamble as written contains several method steps and concepts that are difficult to differentiate, which leads to some ambiguity. Examiner notes that the preamble should be rewritten to coherently illustrate the methodology that forms the framework for the claimed invention. The following is the Examiner's suggestion for conveying a concise understanding of the methodology steps to follow ...
5. a) a method of spectrum analysis in two-dimensional representations of a specific analyzed object (or more concisely, **a method of spectral analysis of an analyzed object in two dimensions**);
6. b) wherein spectral data containing the intensity of the signal output from a spectrophotometer is represented as a function of wave-number, wavelength or time (or more concisely, **wherein spectral data, output from a spectrophotometer is represented as a function of wave-number, wavelength or time**);

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7. c) the n^{th} and m^{th} derivatives of spectral data with respect to wave-number, wavelength or time are calculated, where n and m are integers and $n=m$,
8. d) points are plotted in a two dimensional coordinate plane such as in an XY coordinate system, where the X-coordinate is the n^{th} derivative and the Y-coordinate is the m^{th} derivative;
9. e) characteristic information on the spectral data is obtained, based on the two dimensional derivative plot comprising: ...
10. Examiner further suggests the claim be re-written to reduce ambiguity and to correct typographical errors as follows:
11. **(D)** a step wherein the already estimated band parameter [vales] values are [so adjusted] adjusted so that the already estimated specific component band and [the] a complementary estimation component band with the estimated component band removed coincide with each other; the complementary estimation component band retaining the said estimated specific component band from a spectral profile or two dimensional derivative plot of the analyzed object; and after [estimated] estimating the component band which comprises a spectral profile of the analyzed object by estimating component bands in order by iterating steps (A) to (C), adjusting the already estimated parameter values by a step (D).
12. **Claim 7:** Examiner notes that the use of the term “etc.” renders claim 7 indefinite.
13. Appropriate correction is required.

Allowable Subject Matter

14. Claims 1-5 and 7 are allowed.
15. The following is a statement of reasons for the indication of allowable subject matter:

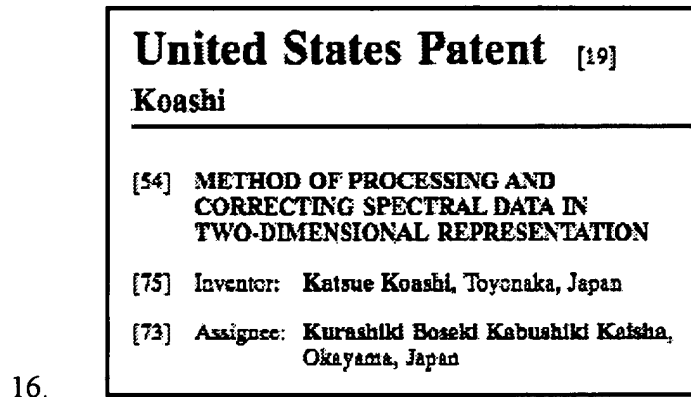


Figure 1 – U.S. Patent 6,154,708 to Koashi

17. As per claim 1 and dependent claims 2-5 and 7, the prior art (U.S. Patent 6,154,708) teaches a method of processing spectral data comprising the steps of a) obtaining spectral data, output from a spectrophotometer as functions of wave-number, wavelength or time, b) calculating the n^{th} and m^{th} derivatives of spectral data with respect to wave-number, wavelength or time, where n and m are integers and $n \neq m$, c) plotting points in a two dimensional coordinate plane such as in an XY coordinate system, where the X-coordinate is the n^{th} derivative and the Y-coordinate is the m^{th} derivative and d) obtaining characteristic information on the spectral data based on the two dimensional derivative plot. The examiner however, found no reference in the prior art that disclosed or made obvious a method comprising the step of: adjusting estimated band parameter values so that the already estimated specific component band and a complementary estimation component band with the estimated component band removed coincide with each other; the complementary estimation component band retaining the said estimated specific component band from a spectral profile or two dimensional derivative plot of the analyzed object as recited in independent claim 1.

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Conclusion

18. This application is in condition for allowance except for the following formal matters:
as noted above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney Thomas whose telephone number is (703) 306-0473. The examiner can normally be reached on M - F (9 am - 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (703) 308 4858. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0530.

Courtney Thomas



**DAVID V. BRUCE
PRIMARY EXAMINER**